# Recent Research 

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# RECENT RESEARCH 

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## PLAINSONG.

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## PLAINSONG

A PAPER READ TO THE MEMBERS OF THE

PLAINSONG AND MEDIAVAL MUSIC SOCIETY

BY

## H. B. BRIGGS.

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## RECENT RESEARCH IN PLAINSONG.

It is proposed in this paper to examine briefly into the present state of our knowledge as to the musical structure of Plainsong. Until about twenty years since, when the Benedictine monks of Solesmes began to publish the results of their systematic study of the music, theories on the art were founded mostly on conjecture. The reason for this was that the chant was composed more than two centuries before the earliest and very rudimentary treatise on the subject was written; that the few later works treated of things from a different point of view to ours, so that they are not very easy to understand ; and that by the time writers become more in accord with us moderns, say the fifteenth century, the rendering of Plainsong had become so corrupted that all theoretical treatises were completely worthless. Practically, therefore, all that we have to work upon is the music itself, with some vague indications in treatises of about the ninth century, which may or may not be comprehensible, and may often be twisted to mean anything we like. The notation in which the music has come down to us is in four forms-viz., the Alphabetic, the Dasian, the Neumatic, and the Square notation. The alphabetic is but rarely met with, and was probably only used for instruction books. The Dasian is used in the MSS. formerly attributed to Hucbald, but these only contain a few examples illustrating the treatises. The neumatic was the notation in general use down to the eleventh century, when it was gradually converted into the ordinary square notation. Now this last shows us exactly the notes to be sung, but very little more. If properly printed in the style of all MSS. until the sixteenth century, the phrasing is fairly well indicated, and it acts very serviceably, far better than modern notation, for singers acquainted with the spirit of Plainsong; but by itself it is as useless as "Rule, Britannia," written in minims would be., But when this square notation is collated with its forerunner, the neumatic, a different state of things appears. The square notation shows only the notes; the neumatic shows none of the notes but almost everything else that converts notes into music. The approximate time value (all that can be given in recitative), the phrasing, the expression, all is given in the neums as clearly as in a modern composition. For example, the podatus only expresses two notes of which the first is lower than the second, but neither the tonal value of the first

TABLE OF NEUMS.

wirga I/X/

punctum , - .

clivis $\wedge \boldsymbol{\lambda}$

porrectus $N \sim \sim$

porrectus
fiexus

podatus $/ \sim /$

torculus $\sim \sim \sim \sim$

$\underset{\text { resupinus }}{\text { torculus }}$ NUS


climacus $\wedge / \angle 入$

stropbicus " "/ 77

epipbonus of.

quilisme

cepbalicus $\rho$

pressus \%

ancus

note nor the interval of the second. But it has four different forms, which must necessarily mean four different renderings of the note-group-i.e., that the first note of the group is accented, but that each note may have a longer or shorter duration according to the form of the neum. And it has even a fifth variety, which I take to be a turn on the first note as indicated by the wavy form given to the lower limb (see neum at end of second line in the Alleluia, p. 12).

Then besides these distinctions in the neums themselves we have what are called Romanian letters, which were added to the MSS. at St. Gall in the eighth century by Romanus, who had been sent from Rome to instruct the Frankish clergy. These indicated that a note was to be held, or to be sung quickly, or to be strongly accented, and so on, all pointing to the fact that Plainsong was intended to be rendered in a thoroughly artistic manner. And the notable peculiarity of these marks of expression is that, if a trained singer who is acquainted with the general spirit of Plainsong sings one of these melodies, he will interpret it instinctively in the manner that 'Romanus marked in his MS. eleven hundred years ago. And he does this because the music being purely vocal, a melody composed for the mere delight of using the voice, he finds that while it affords full scope for his exercising the creative powers of the true artist, the general outline is determined by the music itself. I think I have said sufficient to show that the two notations taken together, the neumatic and the square, must enable us to arrive at a fairly accurate interpretation of a Plainsong melody. Of course at present controversy rages fiercely over innumerable matters. The last shot fired has been a work on the neums by M. Houdard, entitled "Le Rhythme du Chant Grégorien," which is a direct assault on the position taken up by the Solesmes Fathers. My impression is that, so far as he is right, he misunderstands the Solesmes teaching, while, on the other hand, he attempts unsuccessfully to fit the vast number of facts he has collected together to a preconceived theory. The theory propounded by M. Houdard is that the neums show that Plainsong was not recitative but in strict time, and that the note-groups, whether of two, three, or more notes up to seven or eight, all equalled one other. M. Houdard qualifies the strictness of his theory to some extent, so that it is not quite possible to say whether in execution this fixity of rhythm would be carried out; but certainly the examples he gives in modern notation are almost impossible of execution, and much inferior in beauty to the same melodies sung after the method of Solesmes. This system appears to be the one which is founded on the surest basis, and though experience may show that the actual
execution of melodies at the Abbey may admit of modification, it does not seem probable that any violent departure from the method will be made. When it is once granted that Plainsong is recitative, it is evident that no notation can exactly express the rendering that will be given to it by a good singer, while the renderings by a choir and by a soloist will naturally differ in delicacy of detail. The better the choir and the more accustomed they are to the music, the better will be their rendering; but a body of voices can never have the flexibility of the single singer. And in our views as to the interpretation of the chant we must always remember that it was written for Italians with flexible voices, and that the complaint was made even in the eighth century that the Frankish monks with their harsh voices could not execute the florid passages. The result was that notes of ornament such as the quilisma were often omitted from MSS. in the square notation, and the tempo of the ornate melodies was reduced to what one now hears in most Roman Catholic churches.

The essential theory underlying the neumatic notation is of course that the first note of every neum or note-group is accented. A neum, in fact, may be said to represent a modern bar, and the result is that we have a succession of bars containing various numbers of beats-two, three, four, five, six, or seven. There are traces of a certain balance being preserved among these unequal time-measures, but the rules which govern it await the further critical examination of students.*

Having thus briefly taken stock of the materials at our disposal, let us now consider the results that have been attained in the study of the art. The rhythmical structure of Plainsong is founded on that of a prose sentence. This depends on the accentuation of the syllables, and as the succession of accents in prose is irregular, we get what is called free rhythm, in contradistinction to fixed rhythm, which is the characteristic of poetry, where the accents occur at regular fixed intervals. This is the real distinction between Plainsong and modern music. The ancient hymn melodies cannot be strictly termed Plainsong, since they are merely forms of free measured music in an ancient tonality. It is the melodies set to a prose text which are Plainsong, and this is an art sui generis, which apparently cannot be imitated, though there seems no reason why not, if its principles were thoroughly understood. Modern recitative was an independent invention and not a development of Plainsong, and it would be interesting no doubt to compare the different lines on which the two species of music have been developed.

[^0]Plainsong contains two essentially different structural forms, the Arrtiphonal and the Psalmodic, the former being derived from the antiphons and the latter from the psalm-tones. We will first consider the antiphons. They are short melodies in free rhythm, the accentuation being quite dependent on the text. They may be simple and syllabic, or they may be ornate, with several notes to a syllable. The simple form is probably the more ancient, for it is a characteristic of the classic music that has come down to us that there is rarely more than one note to a syllable. Now as the text is prose the music has to follow exactly its accentuation and rhythm, and no note must be dwelt on longer than is necessary for its pronunciation. To take the Antiphon Confitebor, if we were to write it in modern measured music we should have approximately-

with the time signature altered at every bar, as the strong accents should fall on the tonic accents of the words, and the number of syllables between these accents always varies. And this translation can only be approximate, for the time required for the pronunciation of the different syllables is never quite the same. This antiphon is only the half of a psalm verse, and consists of a period which is broken in the middle, but this division is scarcely more than for the purpose of taking breath. When the whole of a psalm verse is used there is a true pause at the colon and a real interruption of the melody. Some few examples contain three distinct periods. The antiphons which are used for the canticles are longer and more ornate, but are equally divisible into two or three periods. The melody of the antiphon class, which was sung by St. Augustine on arrival in England,* consists of four periods, each divided into two cola, and a fifth period consisting of the Alleluia.

Another class of antiphons was the Alleluia after the Gradual (page 12). This begins with a melody for the Alleluia and a long jubilum on the last syllable, forming what we may reckon as two periods. A psalm verse follows, also of two periods, and the melody of the Alleluia is then repeated, making six periods in all, but of different lengths and broken up into unequal cola. Introits, offertories, and communions
also belong to the antiphonal species, which includes the Kyrie, Sanctus, and Agnus," except the earliest music to these texts, which, with the Creed and the melodies to the Gloria in Excelsis, was psalmodic.


Let us turn now to the Psalmodic species of Plainsong. The practice from which this was developed was simply that of monotoning a sentence with a fall of the voice at its close, as in our versicles and responses. This is peculiarly applicable
to Latin, which generally has an unaccented syllable at the end of a sentence. English is not so regular in form, but when there is not a trochaic or dactylic ending the final syllable in the great majority of cases may be treated as

common. In French, on the other hand, the final syllable is generally accented, so that this language cannot be adapted to Plainsong. On this basis of the usual close of Latin sentences being generally on an unaccented syllable, let us see how the ancients treated the recitation of the

Psalms. The mediations, or inflections in the middle of the verse, follow the same principles as the endings, so it is only necessary to consider these latter. A simple ending of the fourth Tone shows what we may consider to be

the primitive form of ending for a trochee. When the last foot is a dactyl the additional syllable is filled in as shown by the hollow note. The second and third Tones are a development from the simple inflection. The reciting note does not continue up to the penultimate syllable of the
trochee, but the inflection becomes a short melody, the penultimate note of which carries the accented syllable. In the first, sixth, and eighth Tones two notes precede the accent, the two-note group in the sixth Tone being treated as a single note; but the first of the two added notes may be accented or not, and this is also the case with the third added note in the fourth Tone. This is because the melody has no fixed rhythm beyond the accent or rallentando on the penultimate note, and I believe the explanation is that, when the chant leaves the reciting note for a lower note, as in all these Tones, there is no reason why this note should not be sung as easily to an unaccented as to an accented syllable. It is like the second syllable in a dactyl which, it is true, is stronger than the third, so that it is no violence to give it an accent, but does not demand it. Now if we turn to the fifth and seventh Tones we find a difference. There the reciting note is left for one higher, and consequently an accented syllable must be given to it, so here the filling in of a third syllable has to be provided for. In the fifth Tone this is done by touching again on the intermediate note before the unaccented one; in the seventh Tone by doubling the unaccented note. Why should this not be done in the fifth Tone? Because in both cases the note that is filled in is the reciting note. This is a curious example of the skill, or rather the naturalness that pervades all Plainsong. Everything is done that in practice tends to ease in the singing, and though this interpolation of a note in the fifth Tone looks so impracticable on paper, I have found a very rough choir do it almost of their own accord as soon as they were told they might. I suppose the reason is that the power of the reciting note makes itself felt, when, as in good chanting, it is given its proper weight and the inflection is treated lightly and as a mere appendage to it. We have examined only the simple forms of the endings, but the more florid ones are treated in the same way. When the single notes have been elaborated into groups they should be treated as single notes, and not split up among syllables.

It may not be amiss to compare the known with the unknown, an Anglican Chant with a Tone. The form of ending was originally the same, the penultimate bar representing the accented penultimate note of the Tone, but in course of time the notes of this bar, if more than one, have been split up among the syllables if necessary, instead of remaining grouped on the one syllable as in a Tone. The last note too has lost its characteristic of being the second syllable of a trochee, and has gained an accent, with the result that the whole trochee, or a group of even four syllables, is allotted to it, and the beginning of the inflection is thrown farther back into the psalm-verse than it would be in a Tone.

The use of vocal harmony also precludes its being pointed on true principles, for, in the example given, the treble part might be pointed as to the fifth Tone, but the alto part must be like the first Tone. The consequence is that to effect a compromise the Anglican Chant has to be sung in fixed rhythm, so that the prose of the psalms is forced into the procrustean bed of regular metre.

A more elaborate form of simple psalmody is to be found in the phrases of the Creed (page 18). There are two forms of ending, depending on whether the final syllable is preceded by an accented or an unaccented syllable. The length of the inflection too is not fixed but varies according to the length of the text, notes being added or omitted as occasion requires, and only in an extreme case are there several reciting notes. The intonation is also expanded when necessary, so as to give the reciting note to the first strong accent. It is also a development of the psalm-form to have different reciting notes in the two halves of the melody. This peculiarity occurs also in the Tonus peregrinus. There are other phrases in the Creed, but the one selected forms the greater part of the melody, and a close examination of the whole composition shows that the simplest materials were so skilfully treated that no imitation has been equally successful. Merbeck was a long way behind, for his Creed is antiphonal rather than psalmodic, while Dumont is not to be mentioned in the same breath. The original MS. of his Missa Regia proves to be written in measured notation, though it was afterwards printed in square notes, because that was the fashion of the day for Church music. Although so simple, the Plainsong melody of the Creed, owing to the modifications that it undergoes in successive phrases, escapes the monotony that is inseparable from all modern settings to unalterable modern chants in fixed rhythm.

We have seen how the simple syllabic antiphon was developed into the highly ornate form of the Alleluia. The same process took place in the psalmodic form, so that it is often hard to distinguish between the two ; but the intermediate stage is interesting, and of this the Tracts (page 18) supply examples. The intonation is slightly elaborated, the reciting note is doubled on the accented syllables, and the inflection is very ornate. The peculiarity, moreover, of the inflection is that here, for the first time, the music is more important than the words. In the Tones the accentuation of the syllables, especially at the end of the verse, decided their apportionment to the notes, but in the psalmody of the Tracts the music is the master. In the example the last three syllables are allotted to the last three phrases of the inflection quite irrespective of accent. It is not difficult to see that the reason is that the accent of the syllable is lost
in the number of notes sung to it. The primary idea was, no doubt, that the penultimate phrase corresponded to the penultimate note in the trochaic Tone-ending, and was the most important of the three groups; but, as this importance showed itself in the melody, it was not necessary that the words should accord with it, while it was necessary that there should be no doubt which syllables were to be sung to the three phrases.

We will examine this peculiarity a little more closely. We all recognise the charms of good oratory or of a good literary style, but it is questionable if any modern critic can exactly define them. It is easy enough to point out defects, but not to lay down distinct rules for attaining perfection. We know that one phrase may run more smoothly than another, but we cannot tell why it does. Now with the Latins it was different. They could identify faults in the rhythm of prose as easily as we can point out mistakes in poetry. Modern poetry depends upon accent, not on quantity, but the prose of Cicero depends, like Latin poetry, on quantity. So important a part is played in Roman oratory by the quantities in the last few syllables of a sentence, that Cicero (в.c. 1о7) in his "De Oratore" and Quintilian (A.D. 42) in "Institutiones Oratoriæ," discuss the matter very fully, laying down certain rules to which good oratory must conform. The grouping of these final syllables is called the cursus, which is of two kinds: metrical, if depending on the quantities of the syllables; rhythmical, if depending on their accentuation. The metrical is what was used in classic times; the rhythmical was in fashion later, between A.D. 400 and 650.

The forms of the metrical cursus were :-

| 1. Velox | glōriam ' congregentur |
| :---: | :---: |
| 2. Planus | mémbrál firmantur. |
| 3. Tardus | ira ${ }^{\prime}$ victoriæ. |
| 4. Trispondaic | esse videotur. |

and Cicero says further that the last syllable is always longi.e., through its ending a sentence.

But besides quantity, Latin also contained accent, which was then an elevation of the voice, not a prolongation of the syllable, and towards the year 400 the conflict between quantity and accent resulted in the supremacy of the latter. The effect of the change was probably that, whereas, e.g., mëmbră firmäntŭr used to require eight beats for its pronunciation, it was now pronounced mêmbrá firmántür, in
five beats. But this change having taken place in the language, there was a corresponding alteration in the cursus.

Rhythm only recognises two forms, either of two or of three syllables, for it is impossible to pronounce more than two perfectly unaccented syllables together. Rhythm, in fact, requires either double or triple time; anything else is a combination of these measures. The new rhythmical cursus was therefore founded on the metrical, by accent taking the place of quantity as follows:-
I. Velox
2. Planus
3. Tardus
4. Trispondaic
gloritia $\mid$ congregéntur .
mémbra | ifrmántur. frà | victórìi. ésse | videáaiur.

Of these the cursus planus and its derivative, the cursus tardus, were most commonly used. Observe that, though of course exceptions occur, the casura is not immediately before the accented syllable nearest to the end, but between the unaccented syllables which precede it, and this makes the phrase run smoothly. The last syllable is unaccented, and though making a feminine ending the last syllable is always long, which rule enables English, with its often long though not necessarily accented final syllables, to adapt itself to the genius of Plainsong.

These four forms of closes, of which the cursus planus became now the most common in place of the cursus velox, governed the style of official Latin between the years 400 and 650, according to the evidence of the Papal Bulls of that period. They then fell into disuse, to be again revived in the twelfth century. In the "Paléographie Musicale" the Solesmes Fathers have shown that the greater part of Plainsong is evidently based on the cursus, especially the cursus planus, and draw the deduction that it must have been composed during the period when the laws of the cursus were generally recognised. Instances of the five-syllable cadence of the cursus planus meet one at every turn in all psalmodic portions of the Service, and, when an extra unaccented syllable occurs at the end, the melody always provides for this as in the psalm-tones. It is found in a simple form in the Preface and the Paternoster, in the Exultet and the Benedictus es, and in still more elaborate forms in the psalmody of the Introits and the Responds. In the specimen of the Respond Psalm on page 18 there is an intonation as usual to fix the tetrachord, the reciting note then follows with an amplification on some of the accented syllables, and then begins the inflection of five
note-gronps, quite irrespective of the accentuation of the syllables, except only that the accented syllable nearest the final is given to the penultimate note-group. Should, however, two unaccented syllables close the verse, the adjustment is not made by splitting up the three notes of the penultimate group, but, as in timui and Filio, by setting

YSALMODY OF TRACT

-PSALMODY OF RESPOND

the accented syllable to a note of anticipation, and allotting the group of three notes intact to the extra unaccented syllable.

In this comparatively simple form of psalmody the object has evidently been to preserve the Latin trochaic ending, both in the melody and the text, while letting the music assert its predominance in the three preceding note-groups.

In the more complex Psalmody of the Tracts the music is altogether supreme in the inflection. In the example we have a cadence of three note-groups, and though the form is evidently based on the trochaic ending, as in most of the text given, yet in Sábaoth, where the accent falls on the antepenultimate instead of the penultimate syllable, there is no adjustment of the extra unaccented syllable, but the last three syllables go to the last three groups. The accentuation of the syllables is evidently merged in the more elaborate musical phrase. The only explanation seems to be that the more florid the music the more it is independent of the text, on which it impresses the accentuation derived from the original model.

From this elaborate Psalmody of the Tracts, where the reciting note often disappears, the step is not far to that of the Graduals of which the different phrases contain the characteristics of a psalm-tone-i.e., an intonation, a reciting note, and an inflection. The first phrase of fustus ut palma is very clear. There is the intonation on $\mathcal{F} u s$, then the reciting note, and then the inflection beginning on the re, the accented syllable nearest the end of the phrase. In the next phrase we may consider the notes on cedrus either as an ornamentation of the reciting note, or as beginning the inflection on the fifth syllable from the end-i.e., treating cedrus Libani as an example of the cursus planus. The next phrase has a longer reciting note and begins the inflection on the accented syllable $c a$, filling in a note for the intruding short syllable bi. These last two phrases have had no intonation, but the next has one on in do, and on this syllable rises to the reciting note, which it decorates, and the inflection begins, as in the preceding phrase, on the accented syllable of the cretic Domini. Each of these last three periods ends with a cadenza which is called a jubilum. The verse $A d$ annuntiandum may be analysed in the same way; but the music is of a more florid description, as it was intended: to be sung by the best singers of the Schola. The accented penultimate syllables in mane and tuam each carry a considerable number of notes, but the closing phrase on per noctem, where the choir would join in, is quite simple, and the jubilum at its close was a well known ending. In the older MSS. these jubila are generally omitted, as they were so well known that it was not worth the trouble of writing them down. It is worth noting that the reciting note is not the same throughout the melody.

Let us now turn to the tonality, which is always an interesting and mysterious subject. M. Gevaert has recently published a work, "La Mélopee antique," which deals at considerable length with the antiphons, and, while showing that most of them have come down through the ages in their
original form, endeavours to account for certain difficulties in the tonality of others which have hitherto defied explanation. In order to consider M. Gevaert's theories, we must examine the whole question of Plainsong tonality as explained
GRADUAL.

by him. The ordinary explanation is that there are eight modes, or scales, consisting of the octaves beginning on every note of the diatonic scale of A, but with only the four notes $\mathrm{D}, \mathrm{E}, \mathrm{F}, \mathrm{G}$ as finals-i.e., one final to every two modes, and
that as an accidental the $b^{*}$ may be introduced to avoid the interval in the melody of the tritone, $F$ to . The question has always been why this $b$ should be allowed, because an examination of the melodies shows that the alleged reason is insufficient, and the further explanation that it provides for the transposition of a melody does not cover the whole ground.

The Greek modes consisted of octaves taken out of the great scale of A, beginning, not as we usually reckon our scales, from below, but from above downwards.

Table of Modes.-I.

| $\begin{aligned} & \text { Classic } \\ & \text { Modes. } \end{aligned}$ | Scale of A transposed to redoce Modes to f -F. | Names. | Church Modes. |
| :---: | :---: | :---: | :---: |
| aa to a | FF ( $\left.b^{b} b b\right)$ | $\left\{\begin{array}{l}\text { Eolian or } \\ \text { Hypodorian }\end{array}\right.$ | II. A-a |
| $g-G$ | GG $\left({ }^{\text {b }}\right.$ ) | $\left\{\begin{array}{l} \text { Iastian or } \\ \text { Hypophrygian } \end{array}\right.$ | IV. B-H |
| f-F | A ( ${ }^{(1)}$ | Hypolydian | VI. C-c |
| e-E | $B b\left(b_{b} b_{b}\right)$ | Dorian | I. D-d |
| d-D | C (b ${ }^{\text {b }}$ ) | Phrygian | III. E-e |
| $\mathrm{c}-\mathrm{C}$ | D (b) | Lydian | V. F-f |
| 鸟B | Eb $\left(b^{b_{b}} b_{b}{ }^{\text {b }}\right.$ ) | Mixolydian | VII. G-g |

a
G
F
E

D

C
B
A

The compass was that of the octave, and the final was the lowest note of the octave in most of them, but (see Table II.) the Iastian and the Hypolydian had three forms-the normal, the strong, and the weak. The strong Iastian had the normal compass, but $\square$ for the final. The weak had the normal $G$ for the final, but the compass d-D of the Phrygian. The strong Hypolydian had the normal compass, but a for the final, while the weak had F for its final but the range $\mathrm{c}-\mathrm{C}$ of the Lydian. Now to bring these octaves within a reasonable compass for the voice, they had to be transposed so that the range should in all cases be $f-F$. If the scale of $A$ be accordingly transposed, as in the second column of Table I., it will be found that the classic modes all lie within the desired compass $\mathrm{f}-\mathrm{F}$; but the curious effect of the transposition is that the key-notes of the transpositions of the A scale are in exactly inverse order to the original finals of the modes. Boethius, when he wrote his famous treatise on music, evidently knew little of the practice. He had heard that the transposed scales were in an ascending order, so that that which served for the Æolian Mode was the lowest, and that for the Iastian the next higher, and so on, but he was quite oblivious of the original position of the modes. He seems to have known that the Æolian was the A octave, and he accordingly starts fairly with that mode, but he makes the Iastian mode begin on B , and so reverses their whole order. The result has been endless confusion and mystification to the student.

But to accompany the seven transposed modes on wind instruments, such as were used in public performances, the player had either to use a different instrument for every mode, or, in later times, a flute like that which has been discovered at Pompeii. By a very ingenious contrivance this instrument was capable of playing all the modes, but had to be prepared beforehand by certain holes being stopped and others left open for the particular mode to be used. The accompaniment of soloists on the lyre presented, however, fewer difficulties. Their vocal scale was necessarily not so restricted, and, moreover, only five modes were used for lyrical music, so that by slight chromatic alterations they could all be brought within a reasonable compass. The lyre was originally tuned in the diatonic scale from $D$ to aa, with the $b$ but without 4 . The lower D was kept for accompaniment only, and the remaining eleven notes, E to aa, served for the melody. This range was sufficient for the following modes if transposed-
r. Dorian, a to aa, with b.
2. Phrygian, G to g , with $b$.
3. Iastian, weak, $G$ to $g$, with $b$.
4. Lydian, F to f , with D .

To provide for two other modes an extra string was added tuned to $\mathrm{e} b$, and this gave, omitting e-
5. Æolian, G to g, with $b$ and eb.
6. Iastian, normal, $F$ to $f$, with $b$ and $e b$.

The next step was to alter the tuning of the strings $\mathrm{c}, \mathrm{d}$, eb to $h, c, d$, which allowed of the transposition of the last two modes a tone higher. We thus have a scale of thirteen notes from $D$ to aa, including both $b$ and 4 , which was commonly in use for lyrical music in the second century. This was extended downwards to A (and even $\Gamma$ ) by later theorists, and we thus again find ourselves in presence of the great scale of $A$, with the addition of the $b$, which is no longer a puzzle.

So far as we know the music of the lyre was the only species that was regularly cultivated, for, with the exception of a doubtful specimen of Pindar, all the compositions which have come down to us are for this instrument. Until the third century lyrical music was a Greek art, and practised at Rome itself chiefly by Greeks. About that time it took root, but again decayed with the transfer of the seat of empire, in A.D. 330, from Rome to Byzantium. Such as it was, however, it formed the basis for the ecclesiastical music which was in course of development. The music in seven modes with accompaniment of wind instruments had been reserved for the pagan temple worship. The music of the lyre in five modes was that of private life. And of these five modes the fragments which have been preserved use only three: the Dorian, Iastian, and Æolian. The less sober Phrygian and Lydian modes are conspicuous by their absence, though there is a small instrumental piece in the Hypolydian.

The earliest Church music, of the date of which we are absolutely certain, consists of the hymns written by St. Ambrose towards the end of the fourth century. Those of which he is certainly the author are: "Deus creator omnium " (120)," " Jam surgit hora tertia" (74), " Æterne rerum conditor" (15), "Veni redemptor omnium" (26), "Illuxit orbi jam dies," "Bis ternas horas explicans." Probably he is also the author of "O lux beata Trinitas"(22), "Hic est dies verus Dei," "Splendor paternæ gloriæ," and " 不terna Christi munera" (61). They are written in our ordinary long measure, and the iambics are quantitative, not accentual ; by licence, however, the first syllables of the first and third lines in a verse may be long. But it seems probable that the change which had already begun to operate in the pronunciation of Latin-i.e., the displacement of

[^1]quantity by accent, affected the hymns in their popular rendering, and that the short syllables became rather lengthened, so that the hymns are rather in duple than triple time. Now it is remarkable that all the above hymn melodies, which can be ascribed to the earliest times, belong to the three principal modes of the lyre: the Dorian, Iastian, and Æolian ; and, since there are two forms of the Iastian, they exhibit four modal forms out of the five of which we have classic examples. The exception is the strong Hypolydian ( $\mathrm{f}-\mathrm{F}$, final a), of which there is only a small instrumental piece. But against this our ecclesiastical specimens contain the strong Iastian and the two mixed modes-IastianÆolian and Æolian-Iastian.

We will now turn to the antiphons, which were mostly composed before the year 600 . The simpler examples are short melodies of one or more phrases sung with a psalm, supposed to be in the same Church mode, and ending on its final. But about some of them considerable doubt has always existed, one writer referring them to one mode and someone else to another. It is not surprising this should be the case when we recognise the confusion that was caused by Boethius; but the matter gets a little clearer when we take account of the modes in which the hymns of the same epoch are written. All these modes are found in the antiphons, and, in addition, the Hypolydian in its three forms, though it is comparatively rare. Plainsong tonality in the year 600, when St. Gregory edited the melodies, was, therefore, that of the old Greek modes, transposed by the addition of $b$ to the great scale of A. The music has survived in a fairly accurate form; but we have no treatises of the period beyond the earlier one of Boethius, who has been shown to have quite misunderstood what he was writing about.
In the ninth century the first' treatises on Plainsong appear, and they show a totally new and Byzantine system of music, which regarded the scale not as a succession of eight notes, but as composed of two tetrachords. In pure Byzantine music these may vary considerably and produce innumerable scales, but the first note of the upper tetrachord in the Greek modes used for Plainsong happened to be in all cases a perfect fifth from the final. In applying the Byzantine system to the music in use, the theorists therefore took the diatonic pentachords on D, E, F, G, and named them protus, deuterus, tritus, and tetrardus-first, second, third, and fourth modesbeginning the upper tetrachords on the perfect fifths.

Table of Modes.-II.

| Classic Modes. |  |  |  | Chtrce Modes. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name. |  | $\begin{gathered} \text { Octave } \\ \text { ON } \end{gathered}$ | Final. | No. | $\begin{gathered} \text { Octave } \\ \text { ON } \end{gathered}$ | Final. |
| ※olian ... | ... | a | a | I. | D | D |
| Iastian, normal... | ... | G | G | VII. | G | G |
| " weak .. | ... | D | G | VIII. | D | G |
| " strong... | ... | G | 4 | IV. | B | E |
| Hypolydian, normal | ... | F | F | V . | F | F |
| , weak | ... | C | F | VI. | C | F |
| ", strong | ... | F | a | II. | A | D |
| Dorian ... ... | ... | E | E | III. | E | E |

These four Church modes were next supposed to have two forms, the authentic and the plagal. In the latter the octave began on the first note of the upper tetrachord transposed an octave lower, but the final remained that of the authentic mode. The melodies in the ancient Æolian, Dorian, and normal Hypolydian and Iastian modes were then allotted to Church modes as in Table II. But the Hypolydian and Iastian had besides the normal two other forms, the weak and the strong. The weak Hypolydian therefore became the third plagal mode (VI.) and the weak Iastian the fourth plagal mode (VIII.), the finals being the same as in the normal forms, though their compass was different. But to bring the strong Hypolydian and strong Iastian modes into the system was a different matter.

The final of the strong Hypolydian being a while its compass was $\mathrm{f}-\mathrm{F}$, it was transposed a fifth lower and called a first plagal mbde (II.), while its transposition required the low Bb , a new note in the scale, and not taken into account by the theorists, who made this Church mode the diatonic octave on the low $A$, instead of the octave on $B b$ with Eq.

The strong Iastian has for its final 4 and the compass g-G. Transposed a fifth lower it becomes a second plagal mode (IV.), but the fifth from its final E was the imperfect fifth $\rangle$ instead of the perfect $\forall$ of the real mode, the Dorian, which
begins on E. This note occurs very rarely in the course of antiphons in this mode, and as they began much in the same way as antiphons of the normal Iastian, or seventh mode, it was the common opinion that the melodies were mixed, beginning in the seventh mode and ending in the fourth. An antiphon must be in the same mode as the-Psalm to which it is affixed; but if an antiphon be in a mixed mode, or in what seems to be a mixed mode, as with these strong Iastian melodies, how should the psalmody be chosen? In modern times it has become the rule to let the close of the antiphon govern the psalm-tone, but in the ninth century it was as often as not the case that the psalmody was governed by the opening of the antiphon, so that for instance we find that the antiphon Ex Egypto, beginning in the seventh and ending in the fourth mode, is classed by Regino among the seventh mode antiphons, while it is now treated as in the fourth mode.

The foregoing explanation of the growth of Plainsong tonality is, I think, a fair abstract of M. Gevaert's views; but then arises the question, what authority is there for the authenticity of the melodies as we have them at the present day? The following are the only data on which we can positively rely. The antiphons can be divided into three groups according to their text :-
r. Melodies to Alleluia and to verses from the Psalms or Canticles (before A.D. 530).
2. Antiphons drawn from other Biblical sources, or specially written for the festival, which were in use in A.D. 600 .
3. Antiphons from the Acts of the Martyrs, \&c., composed during the seventh century.

Until the eleventh century there was no notation in regular use which expressed the tonal value of the chant, and we have no MSS. earlier than the ninth century which even supply the memoria technica of the neums. The only grounds then for our believing that we possess the original melodies must be something quite apart from the earliest documentary evidence. That something is the surprising fact that the melodies of the antiphons, numbering over a thousand, which are contained in the service books of all the countries of Western Europe, are practically uniform. And these melodies came into use in the various countries at different times. Probably England was the first to receive them from Rome at the hands of St. Augustine in 597, and 120 years later the Anglo-Saxon missionary, St. Boniface, introduced them into Germany,
while later still, about 750, the Frankish Empire adopted the Roman chant direct from Rome in place of the Gallican.

But though we find practical uniformity in all MSS. of the thirteenth century, there is a certain group which shows considerable discrepancies, and, as might be expected, they are the antiphons which may be attributed to the strong Iastian mode. Our data for an explanation of these discrepancies are few, but, so far as they go, seem to suffice. The neumatic notation is no guide, but in 850 Aurelian of Réomé classified the antiphons under their modes, and then in goo comes Regino of Prum with his Treatise and the Tonarius tabulating the antiphons of the Offices and of the Mass. And about the same time we have Hucbald, or the unknown authors of the Enchiriadis and other works attributed to him, and lastly the author of the Commemoratio. These last works contain many examples in the Hucbaldian or Dasian notation (page 28), and so give us some ground to work on. Most of the antiphons are classed in these works under the modes to which they are now considered to belong, but there are certain exceptions. These are the melodies which are classed under the third mode, the pentachord of which $\mathrm{E}-4$ contains the tritone F-b. The dominant of the mode was originally, as in others, the fifth $\square$ according to the Commemoratio, but the dislike of the tritone caused the dominant to be moved to $c$, and by the middle of the eleventh century this change seems to have been universal. But the antiphons in the mode, although they were consequently altered, were necessarily not all treated in every country in the same way, so that their melodies differ amongst themselves.

Another cause of error was when a third mode melody has been converted to the first mode by dropping a degree in the scale, owing perhaps to the opening phrase containing only first mode intervals through the omission of the characteristic second, E to F . Some melodies remain unchanged, but out of seventy antiphons classed by Regino under the third mode, only five or six have escaped alteration, one of these being Fac benigna. The discrepancies between the classification of the antiphons under their modes by Regino and that current in later times are assuredly very striking, and are treated by M. Gevaert on certain well defined lines. His work is the most instructive which has yet appeared, and should be closely studied, especially by English musicians, for the versions in our Service Books, with which he is apparently unacquainted, confirm several of his theories.

We have now considered the formation of the tonality of Plainsong, but there is one peculiarity which has not been touched on. The modes are diatonic, but the scale includes
the $b$. Were any other accidentals used ? and were they used as real accidentals and not only for purposes of transposition? Professor Jacobsthal, in his work "Die Chromatische Alteration im liturgischen Gesang," shows that they were not only known but used, and that different versions of melodies have arisen through the efforts of theorists to get rid of these chromatic changes, which on transposition betrayed themselves by a $b$ or $k$. It is interesting to note that he makes free use of the "Graduale Sarisburiense,"* which seems to contain a very pure version of the chant. But before examining one of these melodies it may be well to learn the grounds on which we now know that certain accidentals were recognised in the ninth century.

## 



The notation contained in the Commemoratio, to which we must look for tenth century versions of antiphons, is in the Dasian notation, which has been generally considered to give the exact tonal values. But this belief must be modified in some cases, and we cannot tell how far it will affect our translations of this notation. A fixed value certainly applies to some of the psalm-tones, for instance, which are given in the Commemoratio; but when the same rules of interpretation are applied to others it seems impossible that such tones can ever have existed. We must not, then, too blindly follow M. Gevaert in all the suggestions he makes as to the original

[^2]versions of the antiphons. Some explanation may perhaps be found in the way in which the writer of the Commemoratio regarded the notation he used. In its normal form, a succession of tetrachords, it represented the scale shown on the diagram, but these signs, as appears from the explanation in the Enchiriadis, of pentachords on C and D, were not always absolute; they were certainly sometimes relative-i.e., they did not represent D, E, F, G, but that the note was a tone or a semitone from the one last sounded. So we gather from a series of figures showing the pentachords in an ascending and a descending form, one of which figures is given above. The regular forms are the major and minor $C, D, E, F, G$, and $\mathrm{D}, \mathrm{E}, \mathrm{F}, \mathrm{G}$, a, and the chromatic, one of which is shown on the right limb of the figure, are $C, D, E D, F, G,-$ C, D, E, F\#, G-D, Eb, F, G, a, and D, E, F\#, G, a. The upper tetrachords would be altered in the same way, but as the $E b$ was already provided for by the $b$, the only addition there would be the c\#. The effect of these accidentals was to change the mode, while the range of the pentachord remained unaltered. Thus to flatten the E in the pentachord C-G converted the seventh mode into a first mode pentachord, while to flatten it in D-a transposed the pentachord from the first to the third mode. To sharpen the F in C-G made a fifth mode out of the seventh, and the same change in D-a made a seventh out of a first mode.

Now of these four modes the first and the seventh are the ancient Æolian and Iastian, the third mode is practically the strong Iastian, and the fifth mode is the Hypolydian, which was not used in the Greco-Roman music nor in the early hymns, and first appears in the antiphons. But mixed modes were in use both with the ancients and in the hymns and antiphons, though the only modes which were so used were the Æolian and Iastian. M. Gevaert proposes to amend several of the antiphons, but it is possible the corrections should not be made in the way he suggests, and that the solution of some of the discrepancies he perceives in the melodies should be sought in the direction indicated by Herr Jacobsthal. In our English books we have a very good example of the transposition of a mode in the Offertory In die solemnitatis (page Ir). The melody as it stands in the MS. is transposed a fifth higher than its original seat, so that it begins on $G$ instead of on $C$, and the $b$ in the notation is the equivalent of Eb ; but this transposition replaces it in the octave of the classic Folian mode instead of that of the first Church mode to which it is attributed. For the purpose of comparison with the Hucbaldian system we will consider it as if it were in first-mode form. Up to the end of the phrase vestrce we therefore find that the melody is in the first authentic mode, but the last note is flattened, and this
chromatic alteration continues down to the middle of the Alleluia, when it disappears and the melody closes in the original mode. The accidental converts the first - mode pentachord $\mathrm{D}, \mathrm{E}, \mathrm{F}, \mathrm{G}, \mathrm{A}$, into $\mathrm{D}, \mathrm{E} \mathrm{p}, \mathrm{F}, \mathrm{G}, \mathrm{A}$, the equivalent of the third-mode pentachord $E, F, G, A, B$. The prevailing note in the opening first-mode phrase is the mediant $F$, and in the third-mode portion of the melody this is still the prevailing note. The intention of the composer has therefore obviously been to mix the modes, but to keep the pentachords within the same range. In the hymns the modes were mixed, but without any change of key. Here we find a distinct and interesting advance on the older system, by the mixture of the Æolian and Iastian modes in such a way as to have an identical mediant throughout. We now know the reason for this accidental in the English MSS., but in the Middle Ages the theorists in France were troubled by what they considered a corruption, and accordingly transposed the third-mode phrases a tone higher, and in this form it is found in the Solesmes edition of the Gradual. The result is certainly not so graceful as the English version, for by the elimination of the Eb the transition to the third mode is peculiarly harsh, and the return to the first mode has to be effected by an alteration of the melody. For facility of reference to what has been said on the Hucbaldian theory of the pentachords, and to the modern numbering of the modes, part of the melody has been referred to as being in the third mode, but it is, strictly speaking, in the fourth mode, which is only another. form of the third.

The question of course may be asked, whether the English version, with the modulation on vestra, is more correct than the French, which keeps the whole piece in the same key. The neums will decide it. A MS. of Einsiedeln, which is probably a copy of one brought from Rome in the eighth century, while our version represents the English tradition since 597, marks the note on trace with a $j$, and the next note on dicit with an $e ; j$ means "look out, the note is lower than you expect it to be"-i.e., Eb not E , and $e$ means "repeat the note." These Romanian letters together verify the English version; the ED on tra is lower than would be expected, though by straining a point it might be contended that the EQ satisfied this condition; but the next note is the same-Eb-in the Sarum Gradual, but in the French is $F$, a semitone higher than the E , if that version be adopted, because the following sequence of notes requires this. The reformer did not mind altering the melody just by two notes, but he did not dare change the body of the melody itself, though he damaged the artistic ensemble. Another question as to the use of accidentals is whether they were used as real accidentals or only for the purpose of
modulation, as in the above example. Herr Jacobsthal understands the pseudo-Hucbald to say they were so used. Other translators of the treatise cannot see this meaning in the text. However, if there was such a use of an accidental it occurred in this Offertory In die solemnitatis. It does not appear in any MS. so far as we know, and we can only conjecture where this lost chromatic should be inserted.

Since the above was written the Abbe Dechevrens has published "Etudes de Science musicale," 3 vols. (Blanc, 4, Rue Malebranche, Paris), in which he essays to translate Plainsong into strict time. The work deserves considerable attention, for, though founded on a different theory, the examples seem to indicate in some ways the same results as an artistic rendering of the chant after the method of Solesmes.

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[^0]:    * See further " The Elements of Plainsong " (Vincent). 3s. 6d.

[^1]:    * The numbers refer to "Plainsong Hymn Melodies and Sequences" (Vincent). 2s. 6d.

[^2]:    * A fac-simile Gradual pubiished by the Plainsong and Mediæval Music Society (Quaritch). £4.

